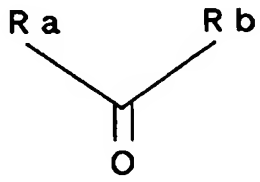
Amendments to the Claims

1. (Original) A method of an enantioselective nucleophilic addition reaction of enamide, which is a method of a nucleophilic addition reaction of an enamide compound accompanied by generation of a hydroxyl group (-OH) to a carbonyl group, being characterized by allowing the reaction to be performed in the presence of a chiral catalyst comprising copper or nickel.

2. (Original) The method of the enantioselective nucleophilic addition reaction of enamide according to Claim 1, being characterized in that the chiral catalyst is constituted by a copper compound or a nickel compound which is a salt of an organic or inorganic acid or a complex or composite of the salt, and a chiral diamine ligand.

3. (Original) The method of the enantioselective nucleophilic addition reaction of enamide according to Claim 2, being characterized in that the chiral diamine ligand has an ethylene diamine structure as a portion thereof.

4. (Original) A method of an enantioselective nucleophilic addition reaction of enamide, which is the method of the enantioselective nucleophilic addition reaction of enamide according to any one of Claims 1 to 3, being characterized in that a nucleophilic addition reaction of an enamide compound accompanied by generation of a hydroxyl group (-OH) to a carbonyl group is performed on a compound having a carbonyl group represented by the following formula:

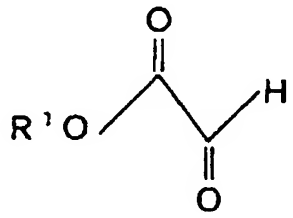


(wherein Ra represents a hydrocarbon group which may have a substituent, R^0-CO- or R^0—O-CO-, wherein R^0 represents a hydrocarbon group which may have a substituent; and

Rb represents a hydrogen atom or a hydrocarbon group which may have a substituent).

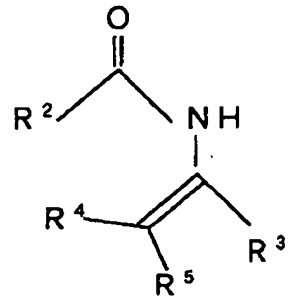
5. (Original) The method of the enantioselective nucleophilic addition reaction of enamide according to Claim 4, being characterized in that the compound having the carbonyl group is a glyoxylic acid ester.

6. (Original) The method of the enantioselective nucleophilic addition reaction of enamide according to Claim 5, being characterized in that the compound having a carbonyl group is a glyoxylic acid ester represented by the following formula (1):



(1)

(wherein R^1 represents a hydrocarbon group which may have a substituent; and the enamide compound is represented by the following formula (2):



(2)

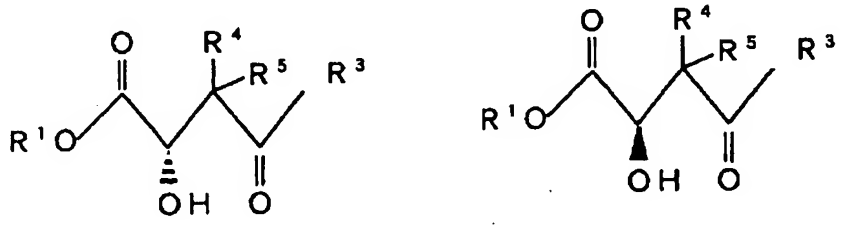
(wherein R^2 represents a hydrocarbon group which may have a substituent or a hydrocarbon group which may have a substituent to be bonded via an oxygen atom;

R^3 represents a hydrocarbon group which may have a substituent;

R^4 and R^5 may be same with or different from each other and each represent a hydrogen atom or a hydrocarbon group which may have a substituent, wherein at least one of them represents a hydrogen atom; and

R^3 may form a ring by being bonded with R^4 or R^5).

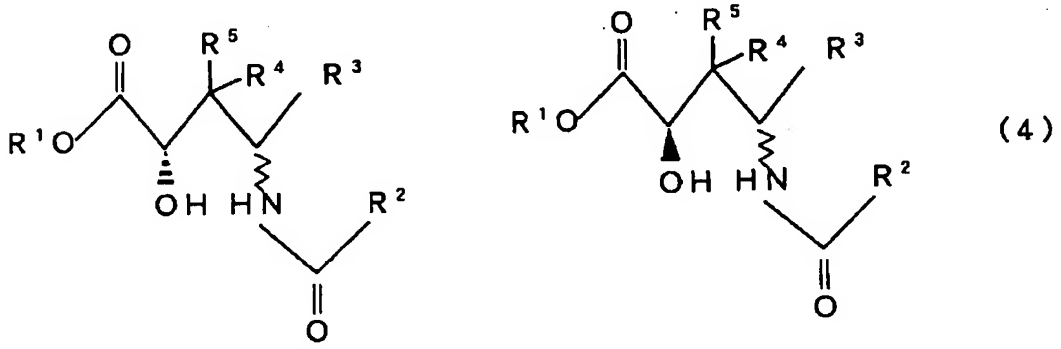
7. (Currently amended) A method for synthesizing an optically active α-hydroxy-γ-keto acid ester, being characterized in that, after the nucleophilic addition reaction according to Claim 6, an acid treatment is performed, to thereby generate a compound represented by at least one of the following formulae (3):



(3)

(wherein R^1, R^3, R^4 and R^5 ~~each represent same article as described above~~ are as defined in Claim 6).

8. (Currently amended) A method for synthesizing an optically active α-hydroxy-γ-amino acid ester, being characterized in that, after the nucleophilic addition reaction according to Claim 6, a reduction treatment is performed, to thereby generate a compound represented by at least one of the following formulae (4):

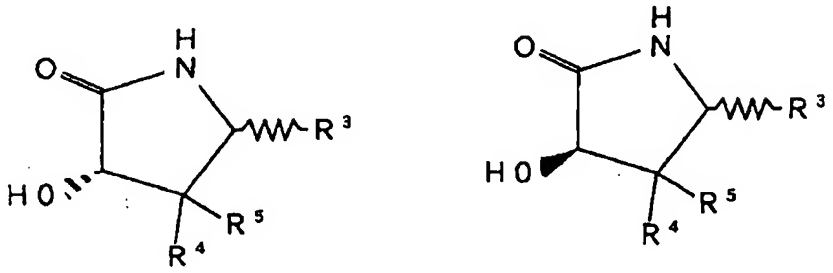


(4)

(wherein R^1, R^2, R^3, R^4 and R^5 ~~each represent same article as described above~~ are as defined in Claim 6).

9. (Original) A method for synthesizing optically active α-hydroxy-γ-lactams, being characterized in that, after a substituent (R^2CO-) on a γ-amino group of the optically active α-hydroxy-γ-amino acid ester synthesized by the method according to

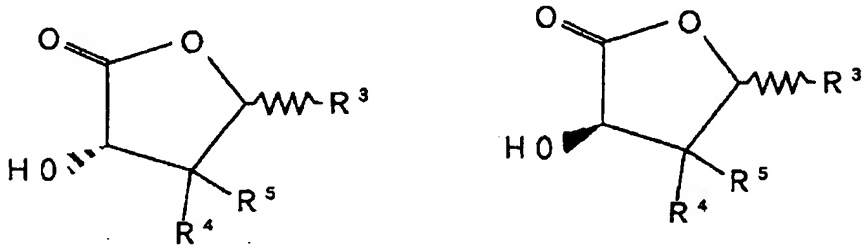
Claim 8 is removed, a cyclization reaction is performed, to thereby generate a compound represented by at least one of the following formulae (5):



(5)

(wherein R^3, R^4 and R^5 each represent same article as described above).

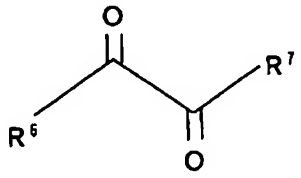
10. (Original) A method for synthesizing any one of optically active α-hydroxy-γ-lactones, being characterized in that the optically active α-hydroxy-γ-keto acid ester synthesized by the method according to Claim 7 is subjected to a reduction reaction and, subsequently, to a cyclization reaction, to thereby generate a compound represented by at least one of the following formulae (6):



(6)

(wherein R^3, R^4 and R^5 each represent same article as described above).

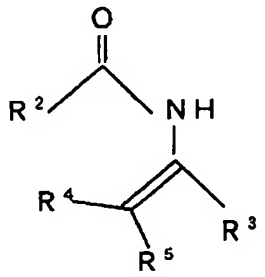
11. (Original) A method of an enantioselective nucleophilic addition reaction of enamide, which is the enantioselective nucleophilic addition reaction of enamide according to Claim 4, being characterized in that the compound having the carbonyl group is a diketone compound represented by the following formulae (7):



(7)

(wherein R^6 and R^7 are same with or different from each other and each represent a hydrocarbon group which may have a substituent); and

the enamide compound is represented by the following formula (2):



(2)

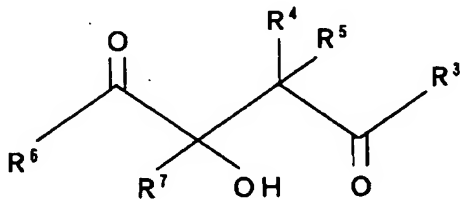
(wherein R^2 represents a hydrocarbon group which may have a substituent or a hydrocarbon group which may have a substituent to be bonded via an oxygen atom;

R^3 represents a hydrocarbon group which may have a substituent;

R^4 and R^5 may be same with or different from each other and each represent a hydrogen atom or a hydrocarbon group which may have a substituent, wherein at least one of them represents a hydrogen atom; and

R^3 may form a ring by being bonded with R^4 or R^5).

12. (Original) A method for synthesizing an optically active hydroxydiketone compound, being characterized in that, after the nucleophilic addition reaction according to Claim 11, a reduction treatment is performed, to thereby generate an optical active compound represented by the following formula (8):



(8)

(wherein R^6, R^7, R^3, R^4 and R^5 each represent same article as described above).